Work Order ID 65111

January 6, 2011 1:29:51 PM

PRELIMINARY ISSUE

Item ID: D206-667-147TRN **Accept**

Revision ID:

Item Name: Crosstube Ass'y

Setup Start

Stop

Start Date: 1/06/11 **Start Qty:** 1.00

Required Date: 1/11/11 **Req'd Qty:** 1.00

Reference:

Cust Item ID:

Customer:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr D206-667-147	**Revision Nbr** ~~PA1~~ A								
100 Mori Seiki Mori Seiki CNC Lathe Large	MORI SEIKI CNC LATHE LARGE **Memo** 1-Fill tube with sand & install plugs DTxxxx on both ends as per Folio FB029 2-Turn first side as per Folio FB029 3-File down transition lines smooth.	0.00 0.00				1			
110 QC Quality Control	QC1- Inspect dimensions to dimension sheet **Memo**	0.00 0.00				1			
120 Mori Seiki Mori Seiki CNC Lathe Large	MORI SEIKI CNC LATHE LARGE **Memo** 1-Turn second side as per Folio FB029 2-File down transition lines smooth. 3-Remove sand and plugs	0.00 0.00				1			

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

Work Order ID 65111

January 6, 2011 1:29:51 PM

Item ID: D206-667-147TRN **Accept** **Setup Start** **Stop**

Revision ID:

Item Name: Crosstube Ass'y

Start Date: 1/06/11 **Start Qty:** 1.00 **Cust Item ID:**

Required Date: 1/11/11 **Req'd Qty:** 1.00 **Customer:**

Reference:

Run Start **Stop**

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	QC1- Inspect dimensions to dimension sheet	0.00				1			
QC	**Memo**	0.00							
Quality Control									
140	QC8- Inspect parts - second check	0.00				1			
QC	**Memo**	0.00							
Quality Control									
150	Crosstubes Chemical Conversion	0.00							
HandFXtube	**Memo**	0.00							
Hand Finishing Crosstubes									

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W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

Work Order ID 65111

January 6, 2011 1:29:51 PM

Item ID: D206-667-147TRN **Accept** **Setup Start** **Stop**

Revision ID:

Item Name: Crosstube Ass'y

Start Date: 1/06/11 **Start Qty:** 1.00 **Cust Item ID:**

Required Date: 1/11/11 **Req'd Qty:** 1.00 **Customer:**

Reference:

Run Start **Stop**

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC3- Inspect Part Finish	0.00				1	0	BEH-1-13	
QC	**Memo**	0.00							
Quality Control									
170		0.00							
Packaging	Packaging								
Packaging	**Memo**	0.00							
	Identify and stock in kanban rack Location: 4/6 (USED ON B69956)								
180	QC21- Final Inspection - Work Order Release	0.00							
QC	**Memo**	0.00							
Quality Control									

11-1-13

Test Rev. A 11.04.29

11/6/8

POSITIVE RECALL
EFFECTIVE 11.8.14 AUTH
RELEASED 92 DATE 11.05.29

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W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

Picklist Print

January 6, 2011 1:29:50 PM

Work Order ID: 65111

Parent Item: D206-667-147TRN

Parent Item Name: Crosstube Ass'y

Start Date: 1/06/11 **Required Date:** 1/11/11

Start Qty: 1.00 **Required Qty:** 1.00

Comments: IPP rev:A 11.01.06 new issue DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6002-115 Crosstube Material		Manufactured	No			100	Each	42.0000	1	1	1	11/01/10	

Location	Loc Qty	Loc Code
LG	42	
34684	1	
34776	41	

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	65111
Description: CROSS TUBE	Part Number:	D206 66714-7
Inspection Dwg: Rev:		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

[X] First Article [ ] Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
2.240	+.005 -0.0	2.244	✓		02-02	
1.984	+.005 -0.0	1.989	✓			
2.019	+.005 -0.0	2.024	✓			
2.058	+.005 -0.0	2.063	✓			
2.097	+.005 -0.0	2.102	✓			
2.136	+.005 -0.0	2.141	✓			
2.176	+.005 -0.0	2.181	✓			
.125	+/- .010	.135	✓			
R.063	+/- .010	.063	✓			
R.063	+/- .010	.063	✓			
R2.00	+/- .030	2.00	✓			
4.438	+/- .010	4.438	✓			
5.160	+/- .010	5.160	✓			
99.84	+/- .020	99.86	✓		02-14	

Measured by:		Audited by:		Prototype Approval:	N/A
Date:	11-1-12	Date:	11/1/12	Date:	N/A

Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/JLM	

Item	Qty -147	Part Number	Description
1	X	D206-667-147	CROSSTUBE ASSEMBLY (206L MID FWD)
2	1	D6002-115	CROSSTUBE
3	2	D2873-043	NUT PLATE
4	2	D2873-045	NUT PLATE
5	2	D2891-1	SUPPORT
6	4	D3595-063-395	RUBBER CUSHION
7	4	MS21920-20	CLAMP (OR MS21920-21)
8	14	MS20601AD4W8	RIVET (OR NAS9302B-4-8)
9	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE)

GENERAL NOTES:

1) MATERIAL: MANUFACTURED FROM D6002-115
   FINISHED LENGTH = 99.84±0.020
2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
   PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
   PAINT OUTSIDE PER DART QSI 005 4.2
3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
4) UNITS: INCHES UNLESS OTHERWISE NOTED.
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
6) IDENTIFICATION: SCRIBE DART PART NUMBER "D206-667-147" AND BATCH NUMBER ON INSIDE OF CUFF PER DART QSI 044 6.4 (VIBRATING STYLUS).
7) WEIGHT: 15.0 lbs (-507 = 12.84)
8) PART IS SYMMETRIC ABOUT CENTERLINE.
9) RUN CUTTER OFF PART WHERE INDICATED. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
10) BEND PROGRESSIVELY WITH A MINIMUM OF 10 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
11) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
12) INSTALL D2891-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
13) INSTALL MS21920-20 CLAMPS (OR -21) WITH D3595-063-395 RUBBER CUSHIONS TO SECURE THE D2891-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMP MECHANISMS ARE LOCATED ON CROSSTUBE SUPPORTS.
14) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS ARE SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

wo 65111

PRELIMINARY ISSUE
Rev. PA1 per chris
see wo 65160

REV.	DESCRIPTION	BY	DATE
A	NEW ISSUE	CP	10.11.23

DESIGN	qp	**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN	qp	
CHECKED		DRAWING NO. D206-667-147 — REV. A — SHEET 1 OF 4
MFG. APPR.		
APPROVED		TITLE: CROSSTUBE ASS'Y (206L MID FWD) — SCALE: NTS
DE APPR.		
DATE	10.12.23	

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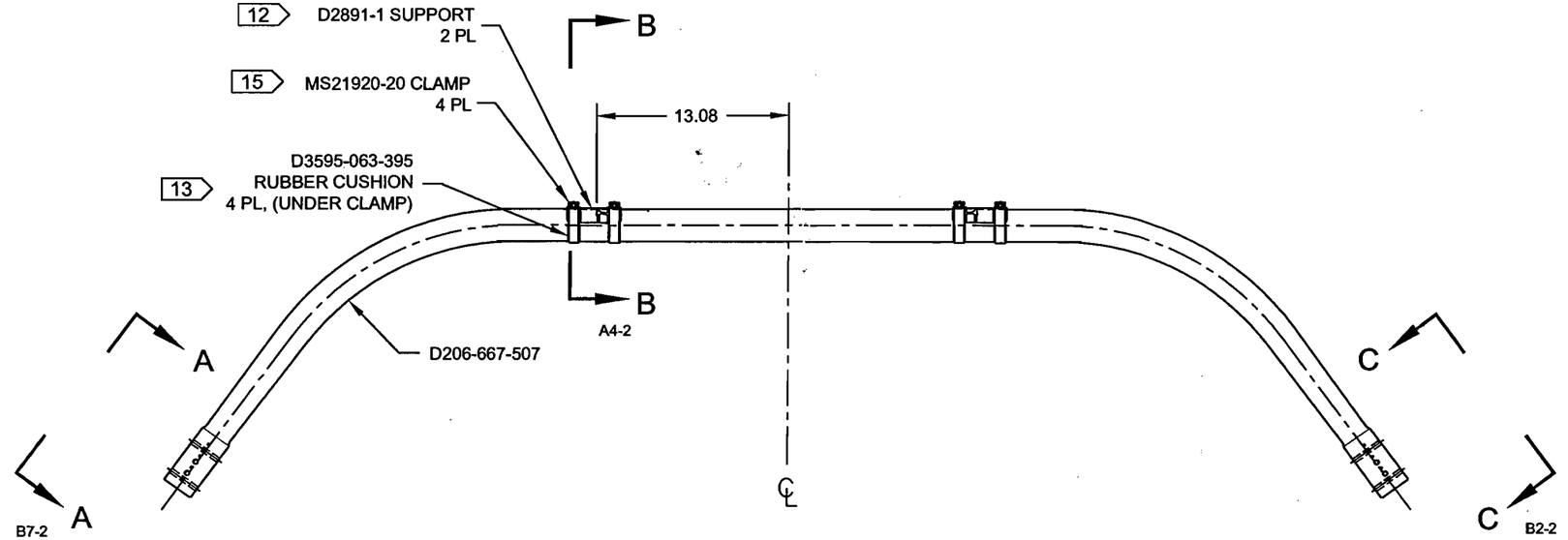
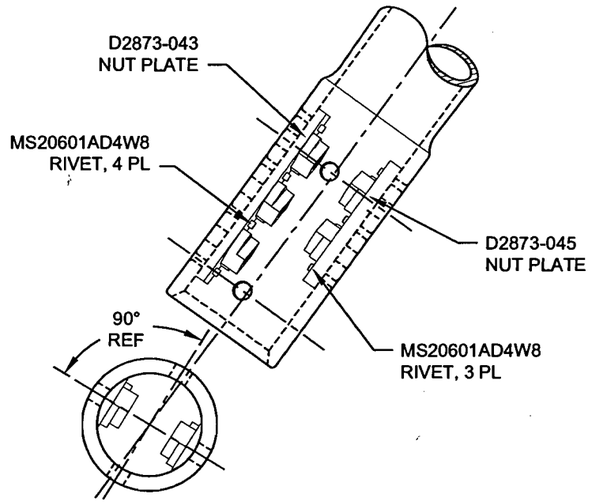
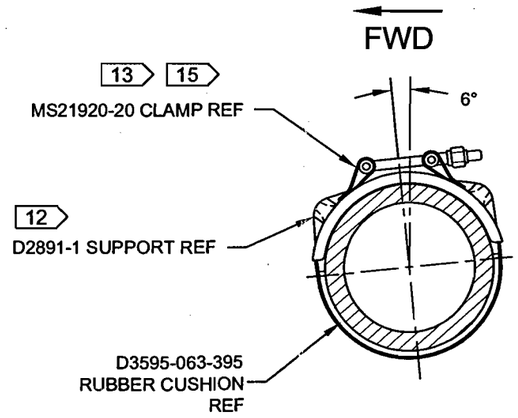


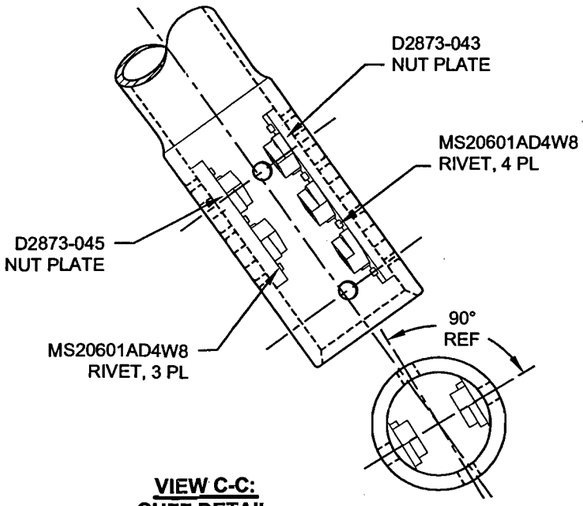
D206-667-147
ASSEMBLY DETAIL
(VIEW LOOKING FWD)



VIEW A-A:
C7-2 **CUFF DETAIL**
SCALE 4X



D5-2 **SECTION B-B**
SCALE 5X



VIEW C-C:
C2-2 **CUFF DETAIL**
SCALE 4X

DESIGN	qp	**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN	qp	
CHECKED		DRAWING NO. D206-667-147 REV. A SHEET 2 OF 4
MFG. APPR.		
APPROVED		TITLE CROSSTUBE ASS'Y (206L MID FWD) SCALE NTS
DE APPR.		
DATE 10.12.23		

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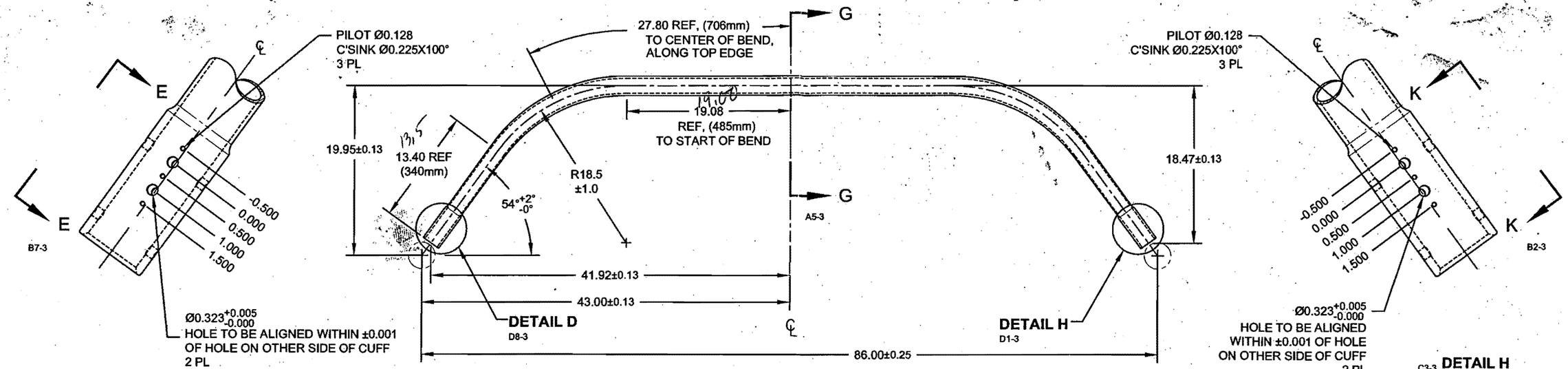
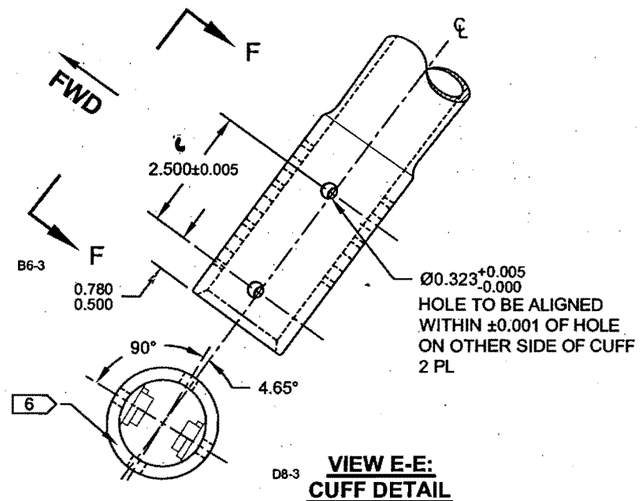


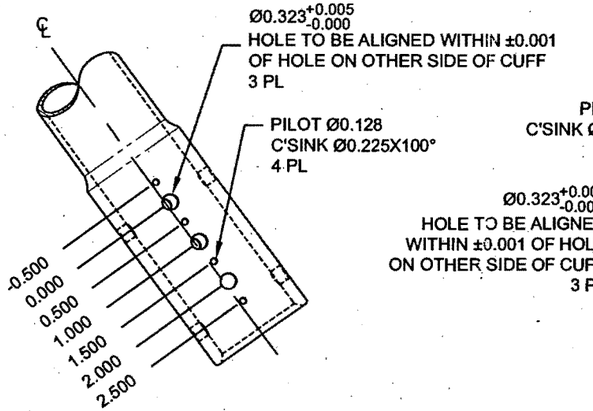
C6-3 **DETAIL D**
SCALE 4X
(VIEW LOOKING FWD)

C3-3 **DETAIL H**
SCALE 4X
(VIEW LOOKING FWD)

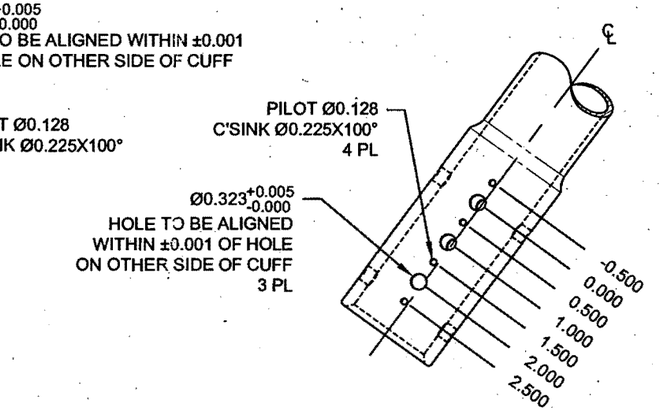
10 **D206-667-507**
BENDING AND DRILLING DETAIL
(VIEW LOOKING FWD)



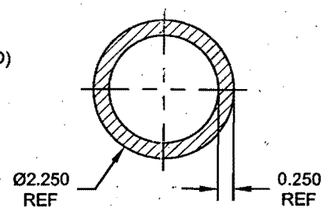
D8-3 **VIEW E-E:**
CUFF DETAIL
SCALE 4X



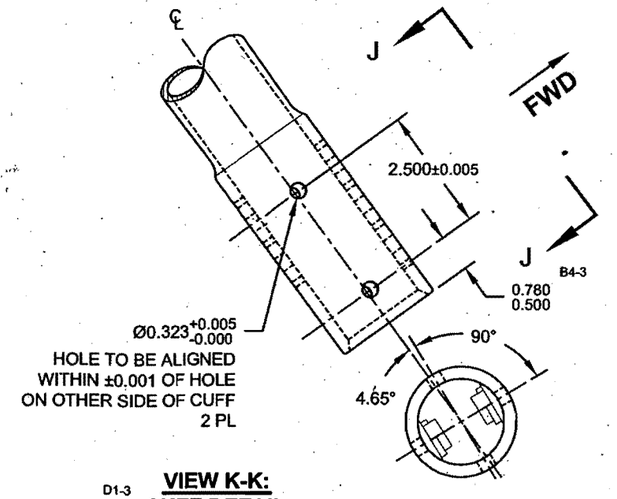
B7-3 **VIEW F-F**
(VIEW LOOKING AFT, ROTATED)



B2-3 **VIEW J-J**
(VIEW LOOKING AFT, ROTATED)

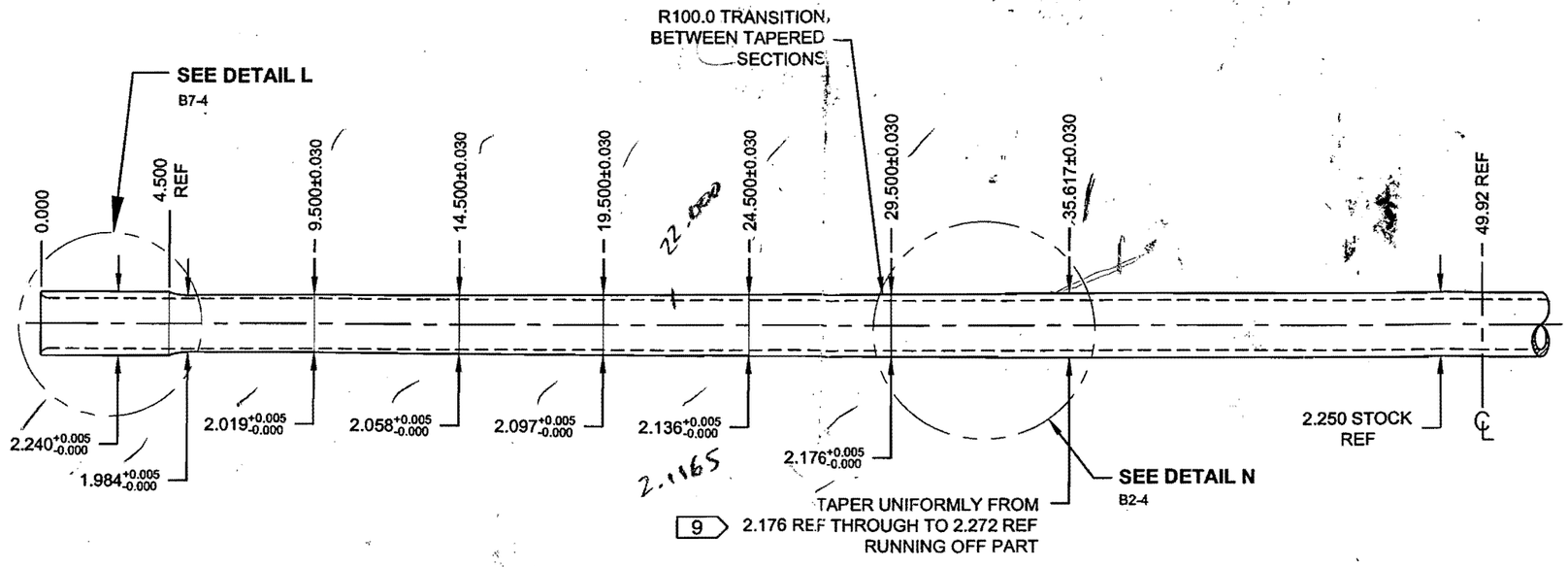


D4-3 **SECTION G-G**
SCALE 5X

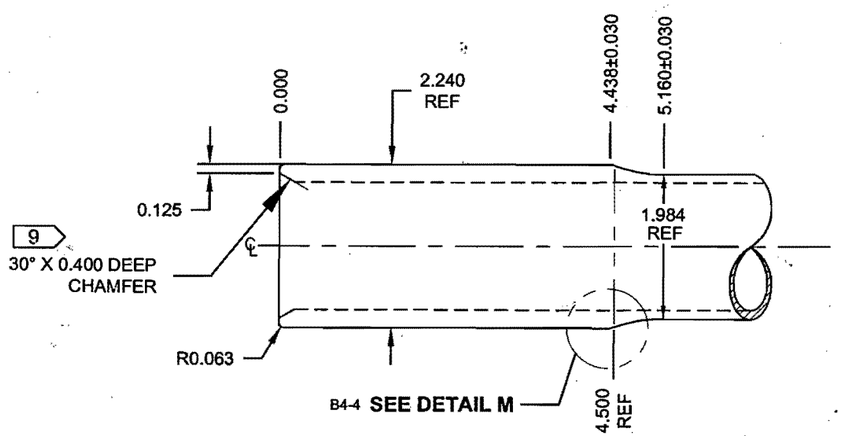


D1-3 **VIEW K-K:**
CUFF DETAIL
SCALE 4X

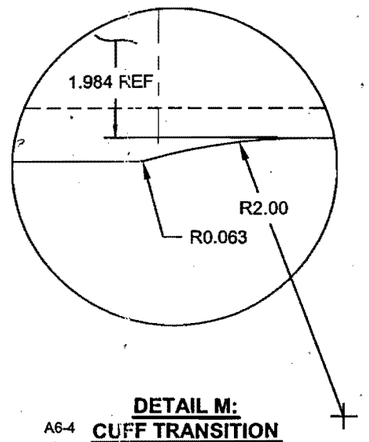
DESIGN	QP	**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN	QP	
CHECKED		DRAWING NO. D206-667-147 REV. A SHEET 3 OF 4
MFG. APPR.		
APPROVED		TITLE CROSSTUBE ASS'Y (206L MID FWD) SCALE NTS
DE APPR.		
DATE 10.12.23		COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



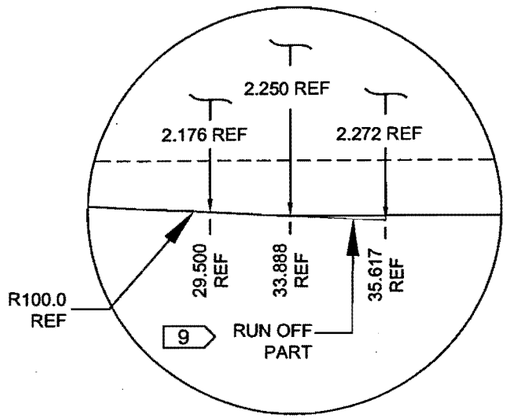
TURNING DETAIL



DETAIL L:
D7-4 **CROSSTUBE CUFF**
NOT TO SCALE



DETAIL M:
A6-4 **CUFF TRANSITION**
NOT TO SCALE



DETAIL N:
C4-4 **TAPER RUN-OFF**
NOT TO SCALE

DESIGN		**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN		
CHECKED		DRAWING NO. D206-667-147 — REV. A — SHEET 4 OF 4
MFG. APPR.		
APPROVED		TITLE: CROSSTUBE ASS'Y (206L MID FWD) — SCALE: NTS
DE APPR.		
DATE	10.12.23	

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Dart Aerospace Ltd.

Date: Friday, 9/21/2007 12:59:28 PM
User: Kim Johnston

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: CROSSTUBE EXTRUSION (206L)
Job Number	: 34776		
Estimate Number	: 10025		
P.O. Number	:	Part Number	: D6002115
This Issue	: 9/21/2007 S.O. No. :	Drawing Number	: D6002 REV A
Prsht Rev.	: NC	Project Number	: N/A
First Issue	: / / Type : RMA	Drawing Revision	: A
Previous Run	: 34684	Material	:
Written By	:	Due Date	: 9/28/2008 Qty: 55 Um: Each
Checked & Approved By	: 07.09.24		
Comment	: Est Rev B 00.12.15 Added: Issue P/O EC		

Additional Product

Job Number:

Seq. #:	Machine Or Operation:	Description :
1.0	PG	PURCHASING

Comment: PURCHASING
Issue P/O 4660
a) Extrude as per Dwg D6002
b) Material: 7075-T6/T6511 (WW-T-700/7 or QQ-A-225/9 or QQ-A-200/11) seamless aluminum tube
c)Minimum ultimate tensile strength = 77 ksi
d)Minimum tensile yield strenght=66 ksi
e)Material certification required

07/09/24 (55)

2.0	D6002115P	Crosstube material

Comment: Qty.: 1.0000 Each(s)/Unit Total : 55.0000 Each(s)
Crosstube material

3.0	PACKAGING 1	PACKAGING RESOURCE #1

Comment: PACKAGING RESOURCE #1
Receive & Inspect For Transit Damage
Ensure material certification is attached

(M 109291) 08/09/16

4.0	QC6	DIMENSIONAL CHECK

Comment: DIMENSIONAL CHECK
Ensure Material certification comply to Dwg D6002

08/04/17 (63) counter

Form: rprocess

Date: Friday, 9/21/2007 12:59:28 PM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services **Drawing Name:** CROSSTUBE EXTRUSION (206L)

Job Number: 34776 **Part Number:** D6002115

Job Number:

Seq. #:	Machine Or Operation:	Description :
5.0	HAND FINISHING1	HAND FINISHING RESOURCE #1

N/A

Comment: HAND FINISHING RESOURCE #1
Chemical Conversion Coat as per QSI 005 4.1

6.0	PACKAGING 1	PACKAGING RESOURCE #1

Comment: PACKAGING RESOURCE #1
Identify and Stock
Location: in front of stores RT 08-09-18

7.0	QC21	FINAL INSPECTION/W/O RELEASE

08/09/18 RJ

Comment: FINAL INSPECTION/W/O RELEASE

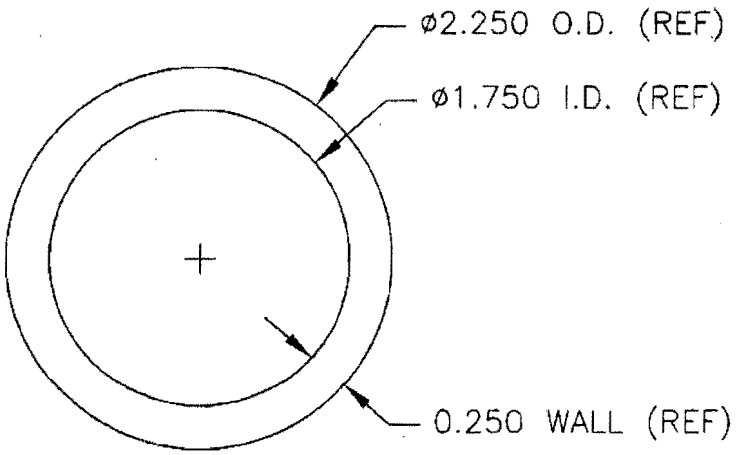
Job Completion

RJ 08.09.18

DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO. D6002 REV. A SHEET 1 OF 1
DATE 00.11.22		TITLE CROSSTUBE MATERIAL SCALE 1:1
A	00.11.22	NEW ISSUE

SPECIFICATION CONTROL DRAWING

RELEASED
00.11.24



NOTES

1) D6002-XXX CROSSTUBE
LENGTH

WHERE XXX IS LENGTH IN INCHES
EG. 115" LONG TUBE: D6002-115

2) MATERIAL: 2.250 OD x 0.250 WALL 7075-T6/T6511 (WW-T-700/7 OR QQ-A-225/9 OR QQ-A-200/11) SEAMLESS ALUMINUM TUBE.
MINIMUM ULTIMATE TENSILE STRENGTH = 77 ksi
MINIMUM YIELD TENSILE STRENGTH = 66 ksi

3) TOLERANCES ARE PER ASTM B210 AS FOLLOWS:
O.D.: ± 0.006 MEAN (±0.012 INCLUDING OVALITY)
WALL: ±0.008 MEAN (±0.025 INCLUDING ECCENTRICITY)
LENGTH: XXX +0.125/-0.000
STRAIGHTNESS: 0.010" DEVIATION / 12" LENGTH

4) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.

5) CHEMICAL CONVERSION COAT PER DART QSI 005 4.1

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 34776

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Packinglist ALUnna AG

Customer PO	PO. 00004660
ALUnna ref. no.	27068/1
Date:	08.12.08

Boxmarking:

Dart Aerospace Po. 00004660 D 6002-115
Made in Germany
Dest. Hawkesbury Ont. Canada

We hereby declare that the wooden packing material are totally free from bark and apparently free from live plant pests

										Boxdimension		
Item no.	Box no.	OD (inch)	ID (inch)	Wall (inch)	Net Weight (lbs)	Tare lbs	Gross Weight	Pieces	lengths (ft)	Lengths (inch)	Width (inch)	height (inch)
1	1	2,250	1,750	,0,250	1160	60	1219	63	10	118,11	21,654	21,654
					1160	60	1219	63		,908 m³		

ALUnna

Abnahmeprüfzeugnis 3.1 - EN 10204:2004

Inspection Certificate 3.1 - EN 10204:2004 / Certificat de Reception 3.1- EN 10204:2004

Kunde: *Client:* Dart Aerospace Ltd.

1270 Aberdeen Street
K6A1K7 Hawkesbury, ON Canada

Zeugnisnummer: *Cert No.: / No. du certificat:* 1174/08

Bestellnummer: *Order No. / No. de commande* PO 00004660

Produkt: *Product / Produit:* Rohre nahtlos gepresst / *Tubes seamless extruded*

Auftrag: *Our Reference/Notre Reference:* 27068/1

Spezifikation: *Specification:* AMS - QQ - A - 200/11E; Spezifikation Dart Aerospace D6001

Werkstoff: *Alloy/Alliage:* 7075

Zustand: *Temper/État* T 6511

Abmessung *Size / Dimension* 2,250 INCH x 1,750 INCH x 0,250 INCH x 115,000 INCH
D6002-115 2.250 X 0.250 X 115

Kennzeichnung *Marking/Marquage:* ALUnna - Cert No. 1174/08 - 7075 - T 6511 - Cast No. 1245 - AMS - QQA 200/11 - 2.250" OD X 0.250" Wall - Heat No. 1819 - Lot 27068/1-1 PO. 00004660

Lieferung *Delivered Material / Matérial délivre:* pcs. 63 lbs 1160

Country of Manufacture: Germany

1. Chemische Analyse — *Chemical Analysis / analyse chimique*

Charge/ Cast No.		Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Zr	Bi	Sn	Ni
	min.			1,2		2,1	0,18	5,1						
	max.	0,40	0,50	2,0	0,30	2,9	0,28	6,1	0,20					
1245/08		0,093	0,185	1,399	0,044	2,455	0,192	5,758	0,036	0,002	0,0167	0,0001	0,0011	0,0001

Hydrogen content: 0,11 **ccm/100 g Al** Elements without indication < 0,01 % **country of melt manufacturer: Germany**

2. Mechanische Eigenschaften — *Mechanical Properties / Valeurs Mécaniques*

Anforderungen Requirements	tensile (Rm) ksi	yield (Rp0,2) ksi	elongation 2" %	elongation A %	Hardness HB	Heat Lot No.
min.	77,0	66,0				
max.						
1	82,070	74,530	11,0			1819 - 63 pcs.
2	82,650	75,255	10,0			

08/09/17

RMS: outside 25 - max. 8,5 µ"

Ergebnis der Prüfungen: Es wird bestätigt, daß die Lieferung geprüft wurde und den Vereinbarungen bei der Bestellannahme entspricht

Test results: We confirm that the delivery has been tested and applies to the agreements made on receipt of the order

Resultats: Nous confirmons que la livraison a été controlée et correspond avec les conventions faites à la réception de la commande

KrampeR

11.08.2008

Certified acc. DIN EN ISO 9001:2000 and DIN EN 9100:2003
valid until 2010-11-11
Cert.- Reg. No.: 001959 QM; 001959 ASH

ALUnna Abnahmebeauftragter

Item	Qty -147	Part Number	Description
1	X	D206-667-147	CROSSTUBE ASSEMBLY (206L MID FWD)
2	1	D6002-115	CROSSTUBE
3	2	D2873-043	NUT PLATE
4	2	D2873-045	NUT PLATE
5	2	D2891-1	SUPPORT
6	4	D3595-063-395	RUBBER CUSHION
7	4	MS21920-20	CLAMP (OR MS21920-21)
8	14	MS20601AD4W8	RIVET (OR NAS9302B-4-8)
9	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE)

GENERAL NOTES:

1) MATERIAL: MANUFACTURED FROM D6002-115
   FINISHED LENGTH = 99.84±0.020
2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
   PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
   PAINT OUTSIDE PER DART QSI 005 4.2
3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
4) UNITS: INCHES UNLESS OTHERWISE NOTED.
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
6) IDENTIFICATION: SCRIBE DART PART NUMBER "D206-667-147" AND BATCH NUMBER ON INSIDE OF CUFF PER DART QSI 044 6.4 (VIBRATING STYLUS).
7) WEIGHT: 15.0 lbs (-507 = 12.84)
8) PART IS SYMMETRIC ABOUT CENTERLINE.
9) RUN CUTTER OFF PART WHERE INDICATED. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
10) BEND PROGRESSIVELY WITH A MINIMUM OF 10 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
11) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
12) INSTALL D2891-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
13) INSTALL MS21920-20 CLAMPS (OR -21) WITH D3595-063-395 RUBBER CUSHIONS TO SECURE THE D2891-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMP MECHANISMS ARE LOCATED ON CROSSTUBE SUPPORTS.
14) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS ARE SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

65111

RELEASED
2011 -05- 26

REV.	DESCRIPTION	BY	DATE
A	NEW ISSUE	CP	10.11.23

DESIGN		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
DRAWN		
CHECKED		DRAWING NO. REV. A
MFG. APPR.		D206-667-147 SHEET 1 OF 4
APPROVED		TITLE SCALE
DE APPR.		CROSSTUBE ASS'Y (206L MID FWD) NTS
DATE	10.12.23	

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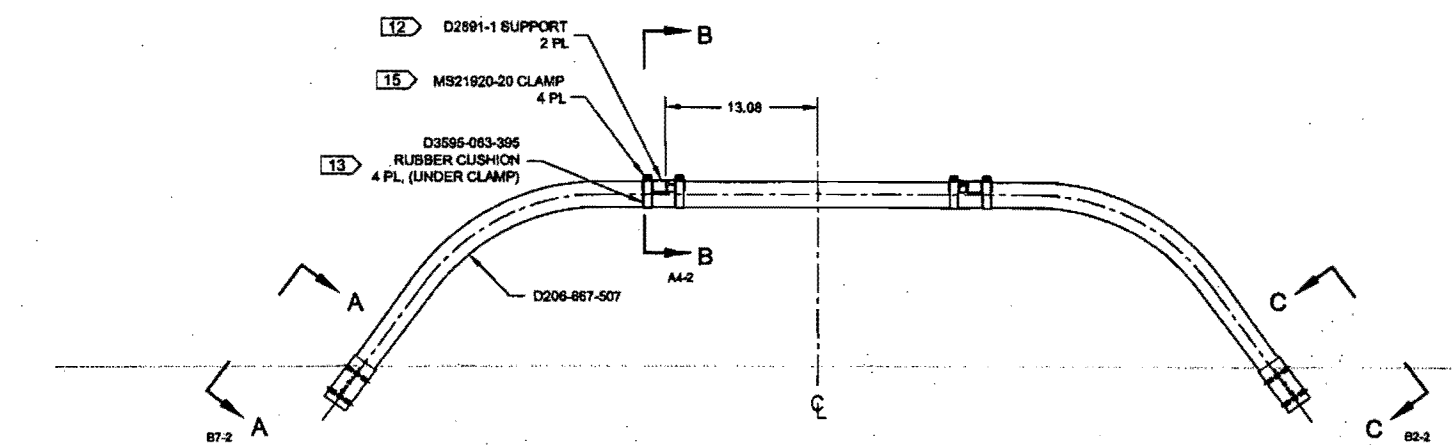

D206-667-147
ASSEMBLY DETAIL
(VIEW LOOKING FWD)

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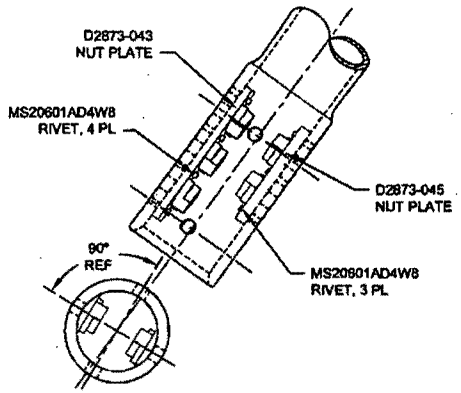
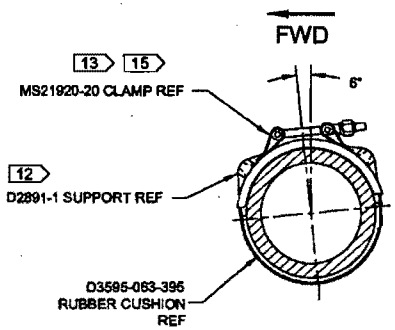
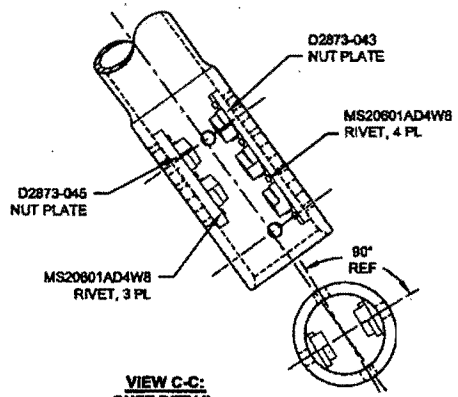
2011 -05- 24



VIEW A-A:
C7-2 CUFF DETAIL
SCALE 4X



D5-2 SECTION B-B
SCALE 5X



VIEW C-C:
C2-2 CUFF DETAIL
SCALE 4X

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DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D206-667-147	SHEET 2 OF 4
APPROVED		TITLE	SCALE
QE APPR.		CROSSTUBE ASS'Y (206L MID FWD)	NTS
DATE	10.12.23		

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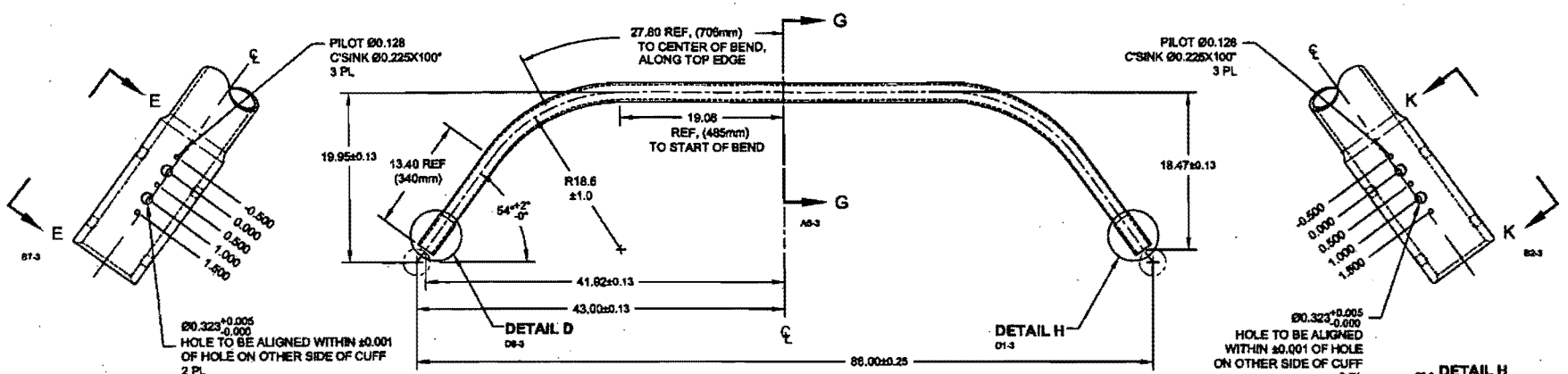
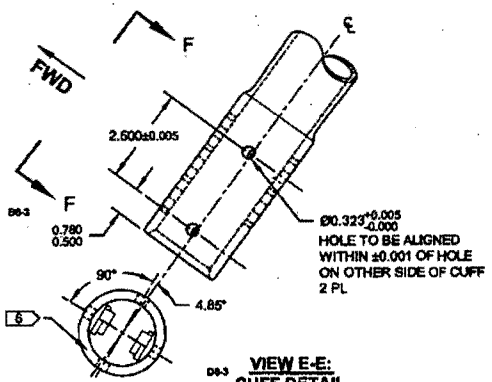


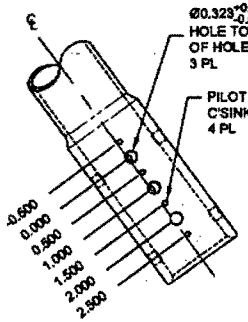
C8-3 **DETAIL D**
SCALE 4X
(VIEW LOOKING FWD)

10 **D206-667-507**
BENDING AND DRILLING DETAIL
(VIEW LOOKING FWD)

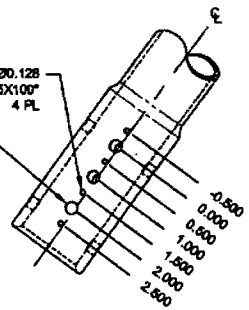
C3-3 **DETAIL H**
SCALE 4X
(VIEW LOOKING FWD)



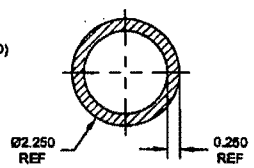
D8-3 **VIEW E-E:**
CUFF DETAIL
SCALE 4X



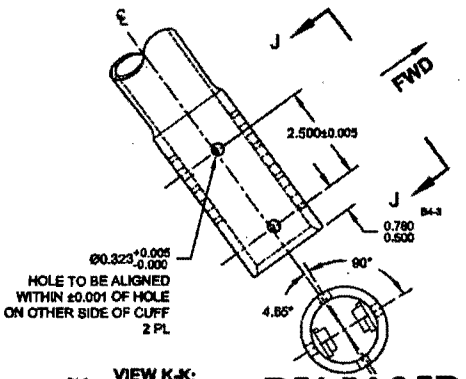
B7-3 **VIEW F-F**
(VIEW LOOKING AFT, ROTATED)



B2-3 **VIEW J-J**
(VIEW LOOKING AFT, ROTATED)



D4-3 **SECTION G-G**
SCALE 5X



D1-3 **VIEW K-K:**
CUFF DETAIL
SCALE 4X

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2011 -05- 24

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DRAWN		
CHECKED		DRAWING NO. REV. A
MFG. APPR.		D206-667-147 SHEET 3 OF 4
APPROVED		TITLE SCALE
DE APPR.		CROSSTUBE ASS'Y (206L MID FWD) NTS
DATE 10.12.23		

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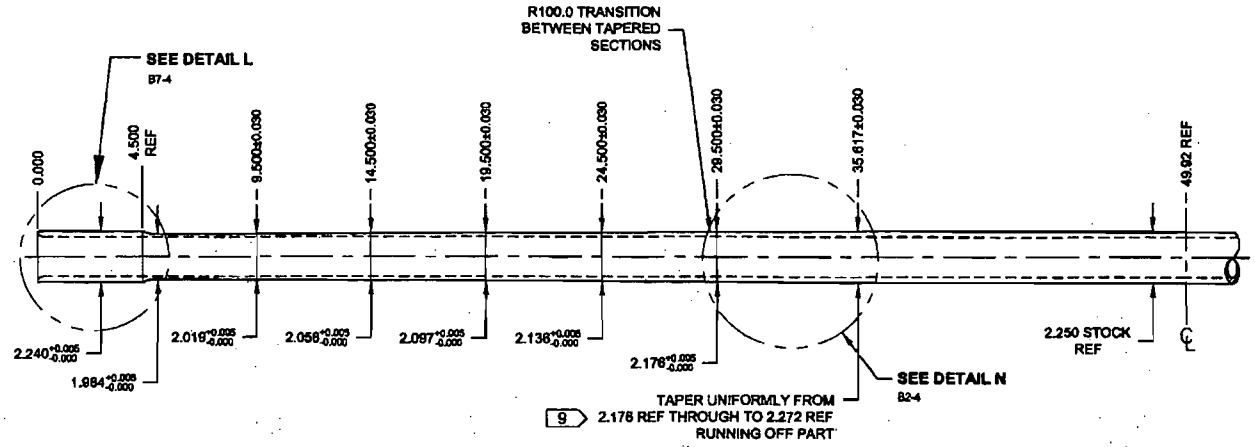
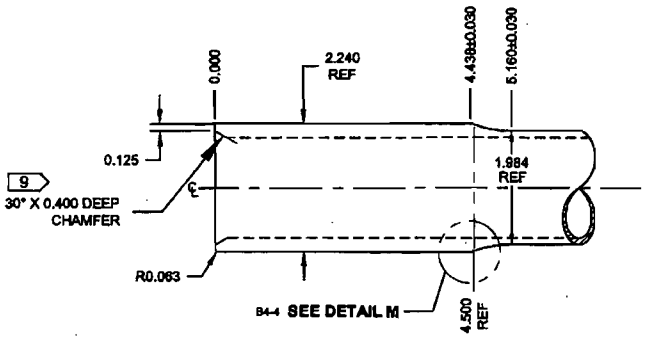
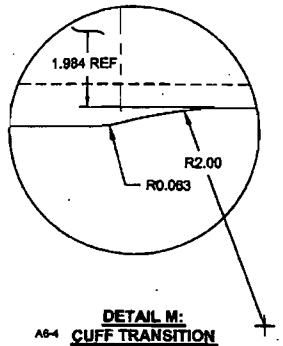


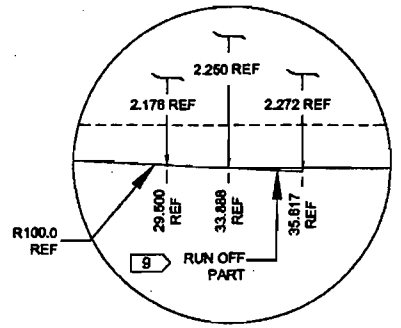
TURNING DETAIL



DETAIL L:
D7-4 **CROSSTUBE CUFF**
NOT TO SCALE



DETAIL M:
A6-4 **CUFF TRANSITION**
NOT TO SCALE



DETAIL N:
C4-4 **TAPER RUN-OFF**
NOT TO SCALE

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2011-05-27

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APPROVED		TITLE SCALE
DE APPR.		CROSSTUBE ASS'Y (206L MID FWD) NTS
DATE 10.12.23		

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